

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A prepackaged semiconductor device assembly comprising:

a solder mask over a substrate;

a die;

conductive paths connecting contacts on said die with contacts in said substrate; and

an adhesive layer which is only partially cured for adhering said die to said solder mask, and
being localized under the die such that no part of the adhesive layer extends past an edge of the die.
2. (Previously Presented) The prepackaged semiconductor device assembly of claim 1,
wherein said adhesive layer is at least fifty percent cured.
3. (Previously Presented) The prepackaged semiconductor device assembly of claim 1,
wherein said prepackaged assembly is encapsulated within a molded package and said adhesive is
fully cured.
- 4-5. (Canceled)
6. (Previously Presented) The prepackaged semiconductor device assembly of claim 1,
wherein said adhesive layer comprises a material with a glassy temperature between about 5°C and
about 20°C.
7. (Previously Presented) The prepackaged semiconductor device assembly of claim 6,
wherein said adhesive layer comprises bismaleimide.
8. (Previously Presented) The prepackaged semiconductor device assembly of claim 7,
wherein said adhesive layer consists essentially of bismaleimide.
9. (Previously Presented) The prepackaged semiconductor device assembly of claim 1,
wherein said adhesive layer comprises initiators which react at a temperature below about 100°C.

10. (Canceled)

11. (Previously Presented) The prepackaged semiconductor device assembly of claim 1, wherein said contacts are substantially free of contaminants outgassed from said solder mask.

12. (Currently amended) A prepackaged semiconductor device assembly comprising:

a solder mask on a substrate;

a die;

electrical contacts on said substrate and said die, each contact on said die being connected to a respective contact on said substrate, said electrical contacts being devoid of contamination caused by outgassing from said solder mask; and

an adhesive layer which is only partially cross-linked affixing said die to said solder mask, and being localized under the die such that no part of the adhesive layer extends past an edge of the die.

13. (Canceled)

14. (Previously Presented) The prepackaged semiconductor device assembly of claim 12, wherein said adhesive layer is at least fifty percent cross-linked.

15. (Canceled)

16. (Previously Presented) The prepackaged semiconductor device assembly of claim 12, wherein said adhesive layer comprises a material with a glassy temperature between about 5°C and about 20°C.

17. (Previously Presented) The prepackaged semiconductor device assembly of claim 16, wherein said adhesive layer comprises bismaleimide.

18. (Previously presented) The prepackaged semiconductor device assembly of claim 16, wherein said adhesive layer consists essentially of bismaleimide.

19. (Previously Presented) The prepackaged semiconductor device assembly of claim 12, wherein said adhesive layer comprises initiators which react at a temperature below about 100°C.

20. (Previously Presented) The prepackaged semiconductor device assembly of claim 12, wherein said contacts remain relatively free of contaminants released by outgassing from the solder mask during a cure process.

21-33. (Canceled)

34. (Previously Presented) The prepackaged semiconductor device assembly of claim 1, wherein said adhesive layer includes a resin bismaleimide.

35. (Canceled)

36. (Previously Presented) The prepackaged semiconductor device assembly of claim 12, wherein said adhesive layer includes a resin bismaleimide.

37. (Canceled)

38. (Previously Presented) The prepackaged semiconductor device assembly of claim 1 further comprising wire bonds connecting respective contacts on said substrate and said die.

39. (Previously Presented) The prepackaged semiconductor device assembly of claim 1, wherein said adhesive layer has adhesive strength sufficient to hold said die to said solder mask during subsequent package assembly processing selected from the group consisting of encapsulation, solder reflow, and testing.

40. (Previously Presented) The prepackaged semiconductor device assembly of claim 12, wherein said adhesive layer has adhesive strength sufficient to hold said die to said solder mask

during subsequent package assembly processing selected from the group consisting of encapsulation, solder reflow, and testing.

41. (Previously presented) The prepackaged semiconductor device assembly of claim 1, wherein said adhesive layer contacts mutually facing surfaces of said die and said solder mask.

42. (Previously Presented) The prepackaged semiconductor device assembly of claim 1, wherein said adhesive layer comprises one or more adhesive components including uncured component material.

43-45. (Canceled)

46. (Previously Presented) The prepackaged semiconductor device assembly of claim 12, wherein said adhesive layer contacts mutually facing surfaces of said die and said solder mask.

47-50. (Canceled)

51. (Currently amended) The prepackaged semiconductor device assembly of claim 12, wherein said prepackaged assembly is encapsulated within a molded package ~~and said adhesive is fully cured.~~